



AQUA-RESLIN®

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name AQUA-RESLIN®
Chemical Name Mixture; a.i., permethrin, piperonyl butoxide
Synonym
MSDS Number 11
Chemical Family
Chemical Formulation
EPA Registration No. 432-796
Canadian Registrat. No.

Bayer Environmental Science
 95 Chestnut Ridge Road
 Montvale, NJ 07645
 USA

For Product Use Information: (800)331-2867 Monday through Friday
 8:00AM-4:30PM
 For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day
 For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

Product Use Description A synthetic pyrethroid for effective adult mosquito, midge and blackfly control.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Permethrin	52645-53-1	20.0000	
Piperonyl butoxide	51-03-6	20.0000	
Other ingredients		60.0000	
Odorless mineral spirits	8052-41-3	10.0000	

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SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview

Caution. Keep out of the reach of children. Hazard to humans and domestic animals. Harmful if swallowed. Wash thoroughly with soap and water after handling. This product is extremely toxic to fish and aquatic invertebrates. This product is highly toxic to bees exposed to direct treatment of residues on blooming crops or weeds.

Physical State

liquid

Odor

Very mild paint or brake-fluid

Appearance

Cream to tan

Routes of Exposure

Inhalation and ingestion.

Immediate Effects

Eye

May cause slight irritation.

Skin

May cause slight irritation.

Ingestion

Harmful if swallowed.

Chronic or Delayed Long-Term

Refer to Section 11 for chronic feeding study in rats under extreme experimental test doses.

SECTION 4. FIRST AID MEASURES

Eye

Flush eyes with plenty of water. Get medical attention if irritation persists.

Ingestion

Call a physician or Poison Control Center. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Avoid alcohol. May pose an aspiration pneumonia hazard.

Note to Physician

This product contains a synthetic pyrethroid and a petroleum solvent. If ingested and vomiting has not occurred, emesis should be induced with supervision. Keep patient's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered. DO NOT administer or instill milk, cream or other substances containing vegetable or animal fats which enhance absorption of lipophilic substances. If localized paresthesia develops, the site should be thoroughly washed with soap and water. Cold cream can be applied to diminish the effect.

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SECTION 5. FIRE FIGHTING MEASURES

Flash Point	> 93 °C / > 199 °F Method: Tagliabue Closed Cup
Suitable Extinguishing Media	carbon dioxide (CO2), dry chemical, foam, water
Fire Fighting Instructions	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal	Soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.
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SECTION 7. HANDLING AND STORAGE

Handling Procedures	Wash thoroughly with soap and water after handling.
Storing Procedures	Store upright at room temperature. Do not contaminate water, food, or feed by storage or disposal.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/Face Protection	safety glasses
Body Protection	impervious gloves

Exposure Limits

Odorless mineral spirits 8052-41-3	ACGIH	TWA	100 ppm
	NIOSH	REL	350 mg/m3
	NIOSH	Ceil_Time	1,800 mg/m3
	OSHA Z1	PEL	500 ppm 2,900 mg/m3
	OSHA Z1A	TWA	100 ppm 525 mg/m3
	US CA OEL	TWA PEL	100 ppm 525 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Cream to tan
Physical State	liquid

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Odor	Very mild paint or brake-fluid
pH	5.1
Specific Gravity	1.015 at 22 °C
Density	8.46 lbs/gal
Solubility (in water)	soluble
Viscosity	170 cp 23 °C

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Conditions to Avoid	extreme temperatures
Hazardous Polymerization (Conditions to avoid)	Will not occur

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide. Rat: LD50: 1,000 mg/kg Slightly toxic.
Acute Dermal Toxicity	The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide. Rabbit: LD50: > 5,000 mg/kg Practically non-toxic.
Acute Inhalation Toxicity	The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide. Rat: LC50: > 2.87 mg/l 4 h Practically non-toxic.
Skin Irritation	The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7

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which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide.
Rabbit: Slightly irritating

Eye Irritation

The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide.
Rabbit: Slightly irritating.

Sensitization

The following data was developed with: Aqua-Permanone (EPA No. 432-796) for which Aqua-Reslin is an alternate name and also Permanone Insect Killer R7 which has a similar formulation of 20.9% Permethrin and 20.1% Piperonyl Butoxide.
Guinea pig: Non-sensitizing

THE FOLLOWING DATA WERE DEVELOPED WITH: permethrin and piperonyl butoxide, the active ingredients.

Chronic Toxicity

A statistically significant increase in the incidence of lung and liver tumors was observed in female mice receiving diets containing 375 and 750 mg/kg/day of permethrin technical over 85 weeks.

A statistically significant increase in the number of benign liver tumors appeared in mice fed piperonyl butoxide technical at doses which far exceed any anticipated daily human intake. Independent and industry toxicological experts who have reviewed the data agree that the findings of the study do not indicate a health risk to human beings.

Assessment Carcinogenicity

ACGIH

None

NTP

None

IARC

Permethrin

52645-53-1

3

Piperonyl butoxide

51-03-6

3

OSHA

None

Reproductive & Developmental Toxicity

Reproductive performance and offspring development in rats were unaffected when piperonyl butoxide was fed at dietary concentrations of up to 1000 ppm over two successive generations.

Teratogenicity

Permethrin was not teratogenic when tested in rats. There were no birth defects or adverse effects on reproductive parameters in tests with rats or rabbits for piperonyl butoxide. It is not considered to be teratogenic.

Mutagenicity

Permethrin did not produce any mutagenic effects when tested in the Ames test.

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Piperonyl Butoxide was not genotoxic in several tests including the Ames mutagenicity assay, chromosome aberration in Chinese hamster ovary (CHO) cells, CHO/HGPRT assay with S9 activation, and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

This pesticide is extremely toxic to fish and other invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment rinsate. Do not apply when wind speeds exceed 10 MPH. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. Do not apply when wind speeds exceed 10 mph.

This product is highly toxic to bees exposed to direct treatment of residues on blooming crops or weeds. Do not apply it or allow it to drift to crops or weeds on which bees are actively foraging. Applications should be timed to provide maximum possible interval between treatment and the next period of bee activity.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of at an approved waste disposal facility.

Container Disposal

Metal Containers: Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Plastic Containers: Triple rinse or equivalent. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

RCRA Classification

Not Regulated under this Statute

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SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: Not DOT Regulated

NOTE: For transport purposes (49 CFR Part 173.132), the calculated 1-Hour LC50 (Rat) is: 11.48 mg/l.

SECTION 15. REGULATORY INFORMATION

US Federal

EPA Registration No.	432-796	
TSCA list		
Piperonyl butoxide	51-03-6	
Odorless mineral spirits	8052-41-3	
TSCA 12b export notification		
None		
SARA Title III - section 302 - notification and information		
None		
SARA Title III - section 313 - toxic chemical release reporting		
Permethrin	52645-53-1	1.0%
Piperonyl butoxide	51-03-6	1.0%

US States Regulatory

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State right-to-know ingredients

Permethrin	52645-53-1	NJ
Piperonyl butoxide	51-03-6	NJ
Odorless mineral spirits	8052-41-3	CA, IL, MN, PA, RI

Canadian Regulations

Canadian Registrat. No.

Canadian Domestic Substance List

Piperonyl butoxide	51-03-6
Odorless mineral spirits	8052-41-3

Environmental

CERCLA

None

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

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None

International Regulations

EU Classification

None

European Inventory of Existing Commercial Substances (EINECS)

Permethrin 52645-53-1

Piperonyl butoxide 51-03-6

Odorless mineral spirits 8052-41-3

SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMS	1	1	0	B
NFPA	1	1	0	

REVISED SECTIONS:

MSDS REVISION INDICATOR: Company name change.

Print Date: 12/03/2002

Supersedes MSDS, which is older than: 12/03/2002

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